

{In Archive} Background Information on MTBE Contamination in Bucks County, PA

Michelle Hoover to: Mike Shields

11/01/2001 12:41 PM

Cc: David Iacono, Christine Hawk, Jack Hwang, Janet Kremer, Rick Rogers, Roger Reinhart, Cynthia Yu

From: Michelle Hoover/R3/USEPA/US

To: Mike Shields/DC/USEPA/US@EPA,

Cc: David Iacono/R3/USEPA/US@EPA, Christine Hawk/DC/USEPA/US@EPA, Jack Hwang/R3/USEPA/US@EPA, Janet Kremer/R3/USEPA/US@EPA, Rick Rogers/R3/USEPA/US@EPA, Roger Reinhart/R3/USEPA/US@EPA, Cynthia

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Mike,

PA DEP provided updates on those sites for which we previously did not have any information. They also suggested a few edits to the draft. Please see the attached file. If you need additional information, please feel free to call me at (215) 814-5258.

Thanks.

Michelle Hoover
EPA Region III
Drinking Water Branch



EPA Testimony for Greenwood Hearing 10-31-

Representative Greenwood's Congressional Hearing
Background Information on MTBE Contamination in Drinking Water In
Bucks County, Pennsylvania
October 31, 2001

A. MTBE Occurrence in Public Water Systems

To obtain MTBE occurrence data in the nation's drinking water supplies, EPA promulgated the final Unregulated Contaminant Monitoring Rule (UCMR) on September 17, 1999 that lays out a systematic approach to collecting high quality data. Under the UCMR, all large community and non-transient, non-community water systems (serving more than 10,000 people) are required to monitor MTBE in their finished water for one year during the three-year monitoring period starting January 1, 2001 until December 31, 2003. As for small systems (serving 10,000 or fewer people), only a representative sample of 800 community and non-transient, non-community systems are statistically selected for monitoring for one year during the same period.

The MTBE sampling results will be reported directly by water systems to EPA's new data reporting system to be completed late 2001. EPA also encourages systems and States to report MTBE data acquired prior to January 1, 2001 as long as systems follow the sampling procedures, analytical methods (including QA/QC), and data reporting requirements detailed in the UCMR.

Following is a list of public water systems in Bucks County, PA that are scheduled for MTBE monitoring between CY 2001 and 2003:

Large Public Water Systems:

<u>System ID#</u>	<u>System Name</u>	<u>Sampling Schedule</u>
PA1090001	PSW-Bristol	At system's discretion
PA1090026	Lower Bucks County Joint Municipal Authority	At system's discretion
PA1090037	Morrisville Municipal Authority	At system's discretion
PA1090043	Newtown Artesian Water Company	At system's discretion
PA1090063	Upper Southampton Municipal Authority	At system's discretion
PA1090069	Warminster Municipal Authority	At system's discretion
PA1090070	Warrington Township Water Department	At system's discretion
PA1090074	PA American Water Company - Yardley	At system's discretion
PA1090082	Quakertown Boro	At system's discretion
PA1090089	Northampton Bucks County Municipal Authority	At system's discretion

Small Public Water Systems:

<u>System ID#</u>	<u>System Name</u>	<u>Sampling Schedule</u>
PA1090137	Township of Buckingham BWC	June, December 2003
PA1091390	Teva Pharmaceuticals, USA	June, December 2002
PA1090827	Elbow Lane Nursery School	May, November 2001
PA1091299	Tinicum Elementary School	May, November 2001

To-date, the Pennsylvania Department of Environmental Protection (PA DEP) has received limited monitoring results from the following public water systems in Bucks County, many of which are small systems that were not selected by EPA under the UCMR to monitor for MTBE, but nevertheless decided to monitor on their own. All the results are below 20 ppb - the Commonwealth's action level.

Large Systems:

<u>System ID#</u>	<u>System Name</u>	<u>Sampling Dates</u>	<u>MTBE Levels</u>
PA1090082	Quakertown Boro.	12/13/00-9/21/01	0.5-1.9 ppb

Small Systems:

<u>System ID#</u>	<u>System Name</u>	<u>Sampling Dates</u>	<u>MTBE Levels</u>
PA1090062	Sellersville Boro Waterworks	9/5/01	0 ppb
PA1090081	Doylestown Boro Water Dept	9/4/01-9/25/01	0 ppb
PA1090931	Scott Specialty Gases Inc.	9/6/01	0 ppb
PA1091351	Lenape Valley Foundation	8/27/01	0 ppb

B. MTBE Contamination in Private Drinking Water Wells

Due to many factors, EPA does not regulate private drinking water wells. Except for few counties within Pennsylvania that issue private well construction permits and provide some drinking water regulation oversight, the majority of private wells owners are on their own to ensure their well water is safe for consumption.

MTBE contamination in private wells, located in Bucks County, so far is suspected to be linked to the leaking underground storage tanks (LUST). PA DEP is the lead agency responsible for implementing the LUST Program in the Commonwealth. EPA Region III provides oversight, technical support, grant funding, and other assistance to PA DEP on the LUST Program.

With respect to drinking water, EPA Region III has worked with PA DEP in some cases to

ensure actions were being taken to provide alternative drinking water sources to the impacted local residents (e.g., by providing bottled water) and conducted follow-up inspection of the facility. In all but one case where PA DEP has been the primary agency in overseeing the response, investigation, and cleanup of the surface and/or ground water surrounding the contaminated site. For one case, EPA Region III was involved in the direct oversight only because EPA initially was referred to a potential Underground Injection Control issue and subsequently identified the potential MTBE contamination issue in private drinking water wells. EPA Region III issued emergency Safe Drinking Water Act Section 1431 Orders to the owners of gas stations requiring them to conduct routine private well and ground water monitoring.

Overall Cases Found in Southeast Region of Pennsylvania

In Pennsylvania, MTBE contamination has been of significant concern in the five-county PA DEP southeastern region, which is densely developed and where reformulated gasoline is required. In spite of its density, many communities in this region depend on private supply wells for drinking water. In the five counties (Bucks, Chester, Delaware, Montgomery and Philadelphia) that comprise the Southeast Region, the population reached 3.8 million in 2000, with 1.9 million registered passenger vehicles in 1999. These five counties comprise one of 32 areas in 18 states that are required to use Reformulated Gasoline (RFG) to reduce ground-level ozone.

In the Southeast Region, PA DEP is currently addressing MTBE contamination from gasoline releases across the region. These active cases include, but are not limited to:

Bucks County

Lehigh Marts Exxon (Routes 113 & 313), Bedminster/Hilltown Townships
Pool's Corner (Routes 202 & 313), Buckingham/Doylestown Townships, Doylestown Borough
BP/Amoco, Warminster Township
Exxon Mobil, Warrington Township
Intersection of Routes 413 & 232, Wrightstown Township
Line Lexington Sunoco, Hilltown Township
Rt 309 Texaco, Hilltown Township
Trevoise Texaco, Lower Southampton
Doylestown Citgo, Doylestown Township
Turk Road, Doylestown Township
Edison-Furlong Texaco, Doylestown Township
Top Star 4 (Quakertown), Milford Township

Chester County

Hrivnak, East Pikeland Township
Lawrence, East Marlborough Township
202 Island Carwash, Concord Township
Cochranville, West Fallowfield Township

Delaware County

Bob North, Upper Chichester Township

Montgomery County

Blue Bell Gulf, Whitpain Township (represents the largest release of gasoline)
Jot Fuels, Horsham Township
Maple Glen, Horsham and Upper Dublin Townships
Franconia Getty, Franconia Township
Jack's (County Line Rd), Horsham Township

Background Information on MTBE Contamination In Bucks County

(1) Lehigh Marts Exxon, Bedminster and Hilltown Townships, Bucks County

In April 2000, MTBE was found in monitoring wells at the Lehigh Marts Exxon station and in private wells near intersection of PA 113 and 313 in the area known as Kulps Corner. The station had formerly been owned by Farm & Home Oil, Co.

At least 14 wells near the intersection had levels of MTBE >20 ppb. In September 2000, the Pennsylvania Department of Environmental Protection (PA DEP) took water samples from 80 homes and detected MTBE in 28 wells. A majority of those wells - 20 - had very small amounts of MTBE that are not considered a potential health hazard under the state and federal drinking water advisory (20 ppb). Eight wells had levels of MTBE above 20 ppb.

Affected residents have been using carbon filtering systems and bottled water, paid for by Farm & Home Oil, Co. Farm & Home Oil, Co. continues to monitor private well water quarterly at homes with filtration systems. As of October 2001, there are 21 residential wells equipped with filtration systems and seven off-site wells have pre-filtration MTBE levels above 20 ppb.

The highest level of MTBE found in off-site wells was < 1,500 ppb.

Farm & Home Oil, Co. submitted its Site Characterization Report and Remedial Action Plan to PA DEP in late 2000. Remediation systems were put into place. Quarterly reports from the company's consultant show that the remediation system appears to be working effectively. MTBE contamination is decreasing at the site and in many of the residential wells.

The Department denied a recent request by Farm & Home Oil, Co. to be released from responsibility for areas defined by the consultant in their Site Characterization report as Zones 2, 3, and 4. DEP believes that because Farm & Home Oil, Co. has not proven the existence of other potential sources of contamination, has not fully delineated the extent of contamination coming from the station, and has not proven the impossibility that the Exxon station is the source of the contamination in these zones, Farm & Home Oil, Co. will continue to shoulder responsibility for these zones.

EPA Region III, Safe Drinking Water Act Branch, Office of Compliance and Enforcement, Water Protection Division, contacted PA DEP and conducted a follow-up inspection of the

facility. EPA Region III ensured that PA DEP was adequately addressing endangerment issue in contaminated water wells.

A group of 15 residents living near the station have filed a lawsuit against the former and current station owners.

(2) Pools Corner, Exxon Mobil and TOSCO station, Buckingham and Doylestown Townships and Doylestown Borough, Bucks County

MTBE contamination in several private wells was first discovered in October 2000 at Pools Corner, where an ExxonMobil and Tosco gasoline stations were located at the intersection of PA 202 and 313. ExxonMobil Corporation's environmental consultant discovered the contamination while testing a monitoring well. Leaking tank systems at both the Exxon Mobil station and TOSCO station are suspected sources for the contamination. The ExxonMobil station closed voluntarily on October 21, 2000 and TOSCO station on October 23, 2000. Both emptied their underground storage tanks and remained closed.

Three municipalities meet at Pools Corner. Residents of Doylestown Borough are served by public water. Affected residents live in Buckingham and Doylestown Townships. ExxonMobil initially sampled all homes within 2,500 feet radius of the intersection. In October 2000, results of 315 samples collected by ExxonMobil showed that MTBE was detected in 25 private wells. Of those, five wells - one serving six homes and a business - showed high levels of MTBE up to 7,000 ppb. Detectable levels below 20 ppb were found in the other 20 wells.

In October 2000, ExxonMobil Corporation provided bottled water to residents and office staff and supplied carbon filtration systems for all private wells with MTBE levels above 1 ppb within the 2,500 feet study area.

ExxonMobil took interim remedial actions of extracting MTBE from on-site wells and soil before installing permanent extraction systems. PA DEP completed its review of Exxon Mobil's Site Characterization Report in June 2001 and asked the company to complete its remedial Plan for ground water clean up by July 1, 2001.

As of October 2001, ground water extraction (pump and haul remediation) at the Exxon Mobil station has reduced contamination to three offsite wells over 20 ppb; the sampling protocol for private wells that are sampled regularly has been reduced to include those closest to the stations and many of the 27 filtration systems installed to protect residents have been sold to the property owners.

The highest level of MTBE found in off-site wells is < 2,000 ppb.

EPA Region III, Safe Drinking Water Act Branch, Office of Compliance and Enforcement, Water Protection Division, contacted PA DEP and ExxonMobil to establish what actions each had taken. EPA Region III was informed that the extent of the contamination had been adequately assessed and impacted water supplies were being addresses. The SDWA Branch is planning no

additional action at this time.

The owners of nine private wells near the gas station have filed a lawsuit against the companies that ran the gas stations.

(3) BP Amoco, Warminster Township, Bucks County

In November 2000, MTBE was found in four private wells near the Amoco station at 440 Street Road. The contamination was found in soil around the station's underground storage tanks in 1998. The station's tank system is the suspected source of contamination.

BP Amoco, the company that owns the gas station, paid about \$90,000 to extend water lines to the affected homes. All four homes are now connected to public water.

The highest level of MTBE found in off-site wells is < 200 ppb.

The Department reviewed the Site Characterization Report and requested remedial actions and quarterly monitoring report from the company.

(4) ExxonMobil, Warrington Township, Bucks County

Private wells around the Warrington Shopping Center near the ExxonMobil gas station at Easton and Bristol roads were contaminated with MTBE. During a site inspection in preparation for selling the property in May 1999, employees of the gas station at Easton and Bristol Roads discovered its well was contaminated with MTBE. The station expanded its investigation and installed several monitoring wells before contacting PA DEP in June 1999. The township was not aware of the problem until January or February of 2000. The station's tank field is the suspected source of contamination.

Three offsite wells were contaminated with MTBE, two of which serve three residences and one serves several stores in the shopping center. Samples taken by ExxonMobil's consultant, Handex Environmental Inc., showed MTBE levels in the affected wells reached 800 ppb in one affected private well but has decreased.

ExxonMobil installed carbon filtration systems in several affected businesses and supplied other businesses with bottled water. ExxonMobil Corporation connected four residences and businesses to an existing public water system.

The highest level of MTBE found at off-site wells is < 100 ppb.

PA DEP reviewed the Site Characterization Report and requested quarterly reports.

(5) Routes 413 & 232, Wrightstown Township, Bucks County

In August 2000, MTBE was discovered in private wells near intersection of Routes 413 and 232 in Wrightstown. Because there were several possible sources of contamination in the area, funds provided through the Underground Storage Indemnification Fund (USTIF) were used to produce a single, impartial study of the area. [USTIF provides legislative-mandated insurance coverage to owners of state regulated underground storage tanks.] The study report submitted to PA DEP indicates that Ferino's Texaco Station and Dale's Auto Service Center share responsibility for contributing to residential supply well contamination in the area. The former Getty Station, while contaminated, does not appear to have contributed to the overall problem.

PA DEP provided bottled water and installed a carbon filtration system at the affected home. The owner of Dale's Auto installed a filtration system on a nearby affected business.

As of October 2001, MTBE levels, once over 100 ppb in at least one nearby offsite well, have dropped to below 5 ppb. Currently, one home and one business have filtration systems and there are no private offsite wells with MTBE in levels above 20 ppb. Approximately 10 wells, which were sampled monthly through July 2001, will continue to be sampled semi-annually.

The highest level of MTBE found at off-site wells was < 200 ppb.

The Department has asked both businesses to develop a Site Remediation Plan by early November 2001. It appears as though both stations had leaky underground tank systems in the past. There does not appear to be an ongoing problem

(6) Line Lexington Sunoco, Hilltown Township, Bucks County

Offsite contamination was discovered in November 2000. DEP recently approved Sunoco's sampling plan through the end of 2001 for residential supply wells. Groundwater & Environmental Services, Inc. of Exton, working on behalf of Sunoco, will continue monitoring 20 wells that have been outfitted with treatment systems through December. Another 49 wells that have not been outfitted with treatment systems were tested in October. The remaining 45 wells no longer will be sampled either because public water has been installed or there is no contamination or threat of contamination evident.

(7) Rt 309 Texaco, Hilltown Township, Bucks County

No private supply wells have been affected, although MTBE has been detected in monitoring wells installed on station property.

(8) Trevoise Texaco, Lower Southampton Township, Bucks County

Offsite contamination was found in March 2000. Motiva installed off-site monitoring wells and on-site recovery wells. A Pump and treat system has been installed. A Site Characterization Report and Remediation Action Plan have been approved by DEP. Underground Storage Tank Indemnification Fund (USTIF) payments in the region (for 696 claims) exceed \$50 million since inception. [USTIF provides legislative-mandated insurance coverage to owners of state regulated underground storage tanks.]

(9) Doylestown Citgo, Doylestown Township, Bucks County

Onsite contamination was discovered in August, 2001 in concentrations that ranged from 23-63 ppb. No offsite contamination has been found. An independent Site Characterization Report will be completed for this station, along with the Sunoco station east of the Citgo. The suspected source of contamination is a leaking tank system.

(10) Turk Road, Doylestown Township, Bucks County

MTBE contamination was found in levels between 1-38 ppb. In seven private wells near an auto salvage operation, which also has onsite levels of MTBE <50 ppb. DEP is currently providing bottled water to four residents, pending a permanent supply of safe drinking water.

(11) Edison-Furlong Texaco, Doylestown Township, Bucks County

Offsite contamination was discovered in February 2001. Five potable wells, serving three businesses and three homes were impacted. The highest concentrations in offsite wells approached 1,000 ppb. A pump and treat system is being operated and the affected properties may be connected to public water as a permanent supply of safe drinking water. DEP received a Remedial Action plan in September 2001. The suspected source of contamination is a leaking tank system.

(12) Top Star 4 (Quakertown), Milford Township, Bucks County

Offsite contamination was first found in February 2001. Three private supply wells had levels of MTBE < 50 ppb. By April 2001, those three residences and five others had been connected to a public water supply. The consultant continues to submit monthly reports to DEP.

(13) Cross Keys, Doylestown Township, Bucks County

Cross Keys is located at intersection of Route 313 (Swamp Road) and Old Route 611 (Easton Road). At the Cross Keys intersection, Mobil owns and operates several underground storage tanks (USTs) at an automobile service station and Motiva owns and operates USTs at a Texaco gas station/convenient store.

Both gasoline stations have had a history of leaking underground storage tanks. Based on reports in the EPA Region III's file, Mobil was monitoring its site as early as June 1989. Results indicated the presence of BTEX and MTBE (as high as 13,000 ppb). Motiva (formerly Star Enterprise) started sampling as early as March 1992. Results indicated high levels of BTEX compounds. MTBE was not originally sampled for.

PA DEP originally referred to EPA Region III, Safe Drinking Water Act Branch, Office of Compliance and Enforcement, a potential Underground Injection Control issue at Martino's Muffler shop (next door to the Mobil facility) in summer of 1995. EPA Region III subsequently inspected the Martino facility and the Mobil gas station. Mobil thereafter copied EPA on monitoring reports which indicated free product (gasoline) found in a few of its monitoring wells. In an information request, Mobil indicated that there is a community of private wells users within 1/4 mile of the facility. In subsequent meetings with Mobil and PA DEP, it was mutually decided that PA DEP would continue to oversee the on-site cleanup and EPA would pursue the potential endangerment to the private well users.

About this time EPA began to investigate the Texaco gas station across the street. After several meetings and phone conferences, EPA issued emergency Safe Drinking Water Act 1431 Orders to each of the oil companies. On 12/20/99, EPA issued a Consent Order to ExxonMobil for quarterly monitoring of BTEX and MtBE at eight residences which rely on private water supplies. The eight homes were selected due to their close proximity to the Mobil facility. On 5/5/00, EPA issued a unilateral Order to Motiva, requiring the company to conduct ground water monitoring in the intermediate location between the facility and the community of private water supplies. **To date none of the monitoring has indicated there is an immediate danger of BTEX or MtBE contamination at any of the private water wells.**

Since November 1997, there have been at least six rounds of sampling conducted at the community of private well users. In all about 12 different wells were tested at one time or another. Initial rounds of testing included a wide range of volatile organic compounds. While no appreciable levels of BTEX and MtBE were identified, there were low levels of chlorinated solvents. These same contaminants were known to exist throughout the area; their source not known. More recently, Mobil's consultant has been conducting monitoring on about eight private wells for BTEX and MtBE only. No appreciable levels of BTEX and very low concentrations of MtBE were identified. (Only one well showed a concentration of 4.0 ppb).

At this point the two companies continue to monitor the ground water. There appears to be no immediate risk of contamination from BTEX and MtBE. Reports are submitted quarterly.

Each of the company facilities worked with the PA DEP in developing and implementing on-site remediation projects. There had been on-going remediation at both facilities overseen by the PA DEP. At one time the Mobil facility had pumped free product (gasoline) from a few of its

monitoring wells. It was not clear where the product came from (all USTs tested to be OK).

EPA Region III continues to review incoming monitoring reports to assure the safety of the private well users.



{In Archive} Reviewed Submission - MTBE Hearing
O'shell, Donald to: Michelle Hoover

10/31/2001 01:20 PM

From: "O'shell, Donald" <doshell@state.pa.us>
To: Michelle Hoover/R3/USEPA/US@EPA,
Archive: This message is being viewed in an archive.
1 attachment



EPA Testimony for Greenwood Hearing 10-31-01.rtf

Michelle:

Some of our regional folks reviewed what you submitted to EPA central office. They made a "few" changes/suggestions. I am not sure if you would want to amend your version and resubmit it at this late date or not. But please be aware - FYI.

Don

<<EPA Testimony for Greenwood Hearing 10-31-01.rtf>>

Be Vigilant, Be Safe
Preventing and Responding to Emergencies
<http://www.dep.state.pa.us/dep/emergency/response/>

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(2) Pools Corner, Exxon Mobil and TOSCO station, Buckingham and Doylestown Townships and Doylestown Borough, Bucks County

MTBE contamination in several private wells was first discovered in October 2000 at Pools Corner, where an ExxonMobil and Tosco gasoline stations were located at the intersection of PA 202 and 313. ExxonMobil Corporation's environmental consultant discovered the contamination while testing a monitoring well. Leaking tank systems at both the Exxon Mobil station and TOSCO station are suspected sources for the contamination. The ExxonMobil station closed voluntarily on October 21, 2000 and TOSCO station on October 23, 2000. Both emptied their underground storage tanks and remained closed.

Three municipalities meet at Pools Corner. Residents of Doylestown Borough are served by public water. Affected residents live in Buckingham and Doylestown Townships. ExxonMobil initially sampled all homes within 2,500 feet radius of the intersection. In October 2000, results of 315 samples collected by ExxonMobil showed that MTBE was detected in 25 private wells. Of those, five wells - one serving six homes and a business - showed high levels of MTBE up to 7,000 ppb. Detectable levels below 20 ppb were found in the other 20 wells.

In October 2000, ExxonMobil Corporation provided bottled water to residents and office staff and supplied carbon filtration systems for all private wells with MTBE levels above 1 ppb within the 2,500 feet study area.

ExxonMobil took interim remedial actions of extracting MTBE from on-site wells and soil before installing permanent extraction systems. PA DEP completed its review of Exxon Mobil's Site Characterization Report in June 2001 and asked the company to complete its remedial Plan for ground water clean up by July 1, 2001.

As of October 2001, ground water extraction (pump and haul remediation) at the Exxon Mobil station has reduced contamination to three offsite wells over 20 ppb; the sampling protocol for private wells that are sampled regularly has been reduced to include those closest to the stations and many of the 27 filtration systems installed to protect residents have been sold to the property owners.

The highest level of MTBE found in off-site wells is < 2,000 ppb.

EPA Region III, Safe Drinking Water Act Branch, Office of Compliance and Enforcement, Water Protection Division, contacted PA DEP and ExxonMobil to establish what

actions each had taken. EPA Region III was informed that the extent of the contamination had been adequately assessed and impacted water supplies were being addressed. The SDWA Branch is planning no additional action at this time.

The owners of nine private wells near the gas station have filed a lawsuit against the companies that ran the gas stations.

(3) BP Amoco, Warminster Township, Bucks County

In November 2000, MTBE was found in four private wells near the Amoco station at 440 Street Road. The contamination was found in soil around the station's underground storage tanks in 1998. The station's tank system is the suspected source of contamination.

BP Amoco, the company that owns the gas station, paid about \$90,000 to extend water lines to the affected homes. All four homes are now connected to public water.

The highest level of MTBE found in off-site wells is < 200 ppb.

The Department reviewed the Site Characterization Report and requested remedial actions and quarterly monitoring report from the company.

(4) ExxonMobil, Warrington Township, Bucks County

Private wells around the Warrington Shopping Center near the ExxonMobil gas station at Easton and Bristol roads were contaminated with MTBE. During a site inspection in preparation for selling the property in May 1999, employees of the gas station at Easton and Bristol Roads discovered its well was contaminated with MTBE. The station expanded its investigation and installed several monitoring wells before contacting PA DEP in June 1999. The township was not aware of the problem until January or February of 2000. The station's tank field is the suspected source of contamination.

Three offsite wells were contaminated with MTBE, two of which serve three residences and one serves several stores in the shopping center. Samples taken by ExxonMobil's consultant, Handex Environmental Inc., showed MTBE levels in the affected wells reached 800 ppb in one affected private well but has decreased.

ExxonMobil installed carbon filtration systems in several affected businesses and supplied other businesses with bottled water. ExxonMobil Corporation connected four residences and businesses to an existing public water system.

The highest level of MTBE found at off-site wells is < 100 ppb.

PA DEP reviewed the Site Characterization Report and requested quarterly reports.

(5) Routes 413 & 232, Wrightstown Township, Bucks County

In August 2000, MTBE was discovered in private wells near intersection of Routes 413 and 232 in Wrightstown. Because there were several possible sources of contamination in the area, funds provided through the Underground Storage Indemnification Fund (USTIF) were used to produce a single, impartial study of the area. [USTIF provides legislative-mandated insurance coverage to owners of state regulated underground storage tanks.] The study report submitted to PA DEP indicates that Ferino's Texaco Station and Dale's Auto Service Center share responsibility for contributing to residential supply well contamination in the area. The former Getty Station, while contaminated, does not appear to have contributed to the overall problem.

PA DEP provided bottled water and installed a carbon filtration system at the affected home. The owner of Dale's Auto installed a filtration system on a nearby affected business.

As of October 2001, MTBE levels, once over 100 ppb in at least one nearby offsite well, have dropped to below 5 ppb. Currently, one home and one business have filtration systems and there are no private offsite wells with MTBE in levels above 20 ppb. Approximately 10 wells, which were sampled monthly through July 2001, will continue to be sampled semi-annually.

The highest level of MTBE found at off-site wells was < 200 ppb.

The Department has asked both businesses to develop a Site Remediation Plan by early November 2001. It appears as though both stations had leaky underground tank systems in the past. There does not appear to be an ongoing problem

(6) Line Lexington Sunoco, Hilltown Township, Bucks County

Offsite contamination was discovered in November 2000. DEP recently approved Sunoco's sampling plan through the end of 2001 for residential supply wells. Groundwater & Environmental Services, Inc. of Exton, working on behalf of Sunoco, will continue monitoring 20 wells that have been outfitted with treatment systems through December. Another 49 wells that have not been outfitted with treatment systems were tested in October. The remaining 45 wells no longer will be sampled either because public water has been installed or there is no contamination or threat of contamination evident.

(7) Rt 309 Texaco, Hilltown Township, Bucks County

No private supply wells have been affected, although MTBE has been detected in monitoring wells installed on station property.

(8) Trevoise Texaco, Lower Southampton Township, Bucks County

Offsite contamination was found in March 2000. Motiva installed off-site monitoring wells and on-site recovery wells. A Pump and treat system has been installed. A Site Characterization Report and Remediation Action Plan have been approved by DEP. Underground Storage Tank Indemnification Fund (USTIF) payments in the region (for 696 claims) exceed \$50 million since inception. [USTIF provides legislative-mandated insurance coverage to owners of state regulated underground storage tanks.]

(9) Doylestown Citgo, Doylestown Township, Bucks County

Onsite contamination was discovered in August, 2001 in concentrations that ranged from 23-63 ppb. No offsite contamination has been found. An independent Site Characterization Report will be completed for this station, along with the Sunoco station east of the Citgo. The suspected source of contamination is a leaking tank system.

(10) Turk Road, Doylestown Township, Bucks County

MTBE contamination was found in levels between 1-38 ppb. In seven private wells near an auto salvage operation, which also has onsite levels of MTBE <50 ppb. DEP is currently providing bottled water to four residents, pending a permanent supply of safe drinking water.

(11) Edison-Furlong Texaco, Doylestown Township, Bucks County

Offsite contamination was discovered in February 2001. Five potable wells, serving three businesses and three homes were impacted. The highest concentrations in offsite wells approached 1,000 ppb. A pump and treat system is being operated and the affected properties may be connected to public water as a permanent supply of safe drinking water. DEP received a Remedial Action plan in September 2001. The suspected source of contamination is a leaking tank system.

(12) Top Star 4 (Quakertown), Milford Township, Bucks County

Offsite contamination was first found in February 2001. Three private supply wells had levels of MTBE < 50 ppb. By April 2001, those three residences and five others had been connected to a public water supply. The consultant continues to submit monthly reports to DEP.

(13) Cross Keys, Doylestown Township, Bucks County

Cross Keys is located at intersection of Route 313 (Swamp Road) and Old Route 611 (Easton Road). At the Cross Keys intersection, Mobil owns and operates several underground storage tanks (USTs) at an automobile service station and Motiva owns and operates USTs at a Texaco gas station/convenient store.

Both gasoline stations have had a history of leaking underground storage tanks. Based on reports in the EPA Region III's file, Mobil was monitoring its site as early as June 1989. Results indicated the presence of BTEX and MTBE (as high as 13,000 ppb). Motiva (formerly Star Enterprise) started sampling as early as March 1992. Results indicated high levels of BTEX compounds. MTBE was not originally sampled for.

PA DEP originally referred to EPA Region III, Safe Drinking Water Act Branch, Office of Compliance and Enforcement, a potential Underground Injection Control issue at Martino's Muffler shop (next door to the Mobil facility) in summer of 1995. EPA Region III subsequently inspected the Martino facility and the Mobil gas station. Mobil thereafter copied EPA on monitoring reports which indicated free product (gasoline) found in a few of its monitoring wells. In an information request, Mobil indicated that there is a community of private wells users within 1/4 mile of the facility. In subsequent meetings with Mobil and PA DEP, it was mutually decided that PA DEP would continue to oversee the on-site cleanup and EPA would pursue the potential endangerment to the private well users.

About this time EPA began to investigate the Texaco gas station across the street. After several meetings and phone conferences, EPA issued emergency Safe Drinking Water Act 1431 Orders to each of the oil companies. On 12/20/99, EPA issued a Consent Order to ExxonMobil for quarterly monitoring of BTEX and MtBE at eight residences which rely on private water supplies. The eight homes were selected due to their close proximity to the Mobil facility. On 5/5/00, EPA issued a unilateral Order to Motiva, requiring the company to conduct ground water monitoring in the intermediate location between the facility and the community of private water supplies. **To date none of the monitoring has indicated there is an immediate danger of BTEX or MtBE contamination at any of the private water wells.**

Since November 1997, there have been at least six rounds of sampling conducted at the community of private well users. In all about 12 different wells were tested at one time or another. Initial rounds of testing included a wide range of volatile organic compounds. While no appreciable levels of BTEX and MtBE were identified, there were low levels of chlorinated solvents. These same contaminants were known to exist throughout the area; their source not known. More recently, Mobil's consultant has been conducting monitoring on about eight private wells for BTEX and MtBE only. No appreciable levels of BTEX and very low concentrations of MtBE were identified. (Only one well showed a concentration of 4.0 ppb).

At this point the two companies continue to monitor the ground water. There appears to be no immediate risk of contamination from BTEX and MtBE. Reports are submitted quarterly.

Each of the company facilities worked with the PA DEP in developing and implementing

on-site remediation projects. There had been on-going remediation at both facilities overseen by the PA DEP. At one time the Mobil facility had pumped free product (gasoline) from a few of its monitoring wells. It was not clear where the product came from (all USTs tested to be OK).

EPA Region III continues to review incoming monitoring reports to assure the safety of the private well users.



{In Archive} MTBE Info
O'shell, Donald to: Michelle Hoover

10/22/2001 05:58 PM

From: "O'shell, Donald" <doshell@state.pa.us>
To: Michelle Hoover/R3/USEPA/US@EPA,
Archive: This message is being viewed in an archive.
1 attachment



Southeast Regional MTBE Case Information Requested by EPA.doc

Michelle:

Please find below the information compiled by our
SERO. The segment
included in the text of this email was previously
provided to Congressman
Greenwood's office. The attachment was developed for
your request. Please
let me know if you need additional information.
Thanks!

Don

In
Pennsylvania, MTBE contamination has been
of significant concern in the five-county DEP
southeastern region, which is
densely developed and where reformulated gasoline is
required. In spite of
its density, many communities in this region depend
on private supply wells
for drinking water. In the 5 counties that comprise
the Southeast Region,
the population reached 3.8 million in 2000, with 1.9
million registered
passenger vehicles in 1999. These 5 counties
comprise one of 32 areas in 18
states that are required to use RFG to reduce
ground-level ozone.

In
the Southeast Region, DEP is currently
addressing MTBE contamination from gasoline releases
across the region.
These active cases include, but are not limited to:

BUCKS

Intersection of Rts. 413/232, Wrightstown
Twp.

Lehigh Marts, Bedminster/Hilltown Twps.

Line

Lexington Sunoco, Hilltown Twp.
 Trevoise Texaco, Lower Southampton
 Doylestown Citgo, Doylestown Twp. Turk
 Road, Doylestown Township
 Pool's Corner, Buckingham/Doylestown Twps.,
 Doylestown Borough
 Edison-Furlong Texaco, Doylestown Twp.
 Warrington Mobil, Warrington Twp.
 Warminster BP/Amoco, Warminster Twp. Rt
 309 Texaco, Hilltown Twp. Top
 Star 4 (Quakertown) Milford Twp.

CHESTER

Hrivnak, East Pikeland Twp.
 Lawrence, East Marlborough Twp. 202
 Island Carwash, Concord Twp.
 Cochranville, West Fallowfield Twp.

DELAWARE

North, Upper Chichester Twp. Bob

MONTGOMERY

Bell Gulf, Whitpain Twp., Montgomery Blue
 Fuels Horsham Twp., Montgomery Co. Jot
 Maple Glen, Horsham and Upper Dublin Twps.

Franconia Getty, Franconia Twp.
 Jack's (County Line Rd) Horsham Twp.

UPDATES:

Blue

Bell Gulf, a case that began in
 Montgomery County in the spring of 1998, represents
 the largest release of
 gasoline, and the greatest cost of contamination to
 date. Between February
 and May, 1998, 15,000 gallons of gasoline leaked from

the station's system.

Fifteen homes were connected to public water supplies. To date, more than \$2.5 million has been spent investigating the extent of the impact from this release. The remedial system design, construction and operation will cost millions more.

In
one year's time, we experienced 11 new groundwater contamination cases in Bucks County. Updates for some of these cases include:

Lehigh Marts Exxon, Bedminster and Hilltown townships, Bucks County

Offsite contamination was found in May, 2000. More than 20 homes have filtration systems. Quarterly reports from the consultant show that the remediation systems appear to be working effectively as the MTBE contamination is decreasing at the site and in many of the residential wells. The Department denied a recent request by Farm and Home Oil Company to be released from responsibility for areas defined by the consultant as Zones 2, 3, and 4. Because Farm and Home has not proven the existence of other potential sources of contamination, has not fully delineated the extent of contamination coming from the station, and has not proven the impossibility that the Exxon station is the source of the contamination in these zones, Farm and Home will continue to shoulder responsibility for these zones.

Pools Corner, ExxonMobil and TOSCO station releases affecting Buckingham and Doylestown Twp., Doylestown Borough

Offsite contamination was found in October, 2000. Both stations remain closed. Groundwater extraction (pump and haul remediation) at the ExxonMobil station has reduced contamination to 3 offsite wells over 20 ppb; and 27 filtration systems were installed to protect residents.

Lexington Sunoco, Hilltown Twp., Bucks County

Line

Offsite contamination was discovered in

November, 2000. The Department recently approved Sunoco's sampling plan through the end of 2001 for residential supply wells. Groundwater & Environmental Services, Inc. of Exton, working on behalf of Sunoco, will continue monitoring 20 wells that have been outfitted with treatment systems through December. Another 49 wells that have not been outfitted with treatment systems will be tested in October. The remaining 45 wells no longer will be sampled either because public water has been installed or there is no contamination or threat of contamination evident.

Wrightstown, Bucks County

Offsite contamination was discovered in August, 2000. The Department has received a combined, USTIF-funded Site Characterization Report for two gasoline stations and one former gas station at the intersection of Routes 413 and 232 in Wrightstown. The report indicates that Ferino's Texaco Station and Dale's Auto Service Center share responsibility for contributing to residential supply well contamination in the area. The former Getty Station, while contaminated, does not appear to have contributed to the overall problem. The good news is that MTBE levels, once over 100 ppb in at least one nearby offsite well, have dropped to below 5 parts ppb. The Department has asked both businesses to develop a Site Remediation Plan by early November. It appears as though both stations had leaky underground tank systems in the past. There does not appear to be an ongoing problem. DEP staff met with representatives of Ferino's and Dale's in September to review the report, get comments and move forward with a remediation plan. The proposed fine against Ferino is off the table for now, until the cleanup is complete. Approximately 10 wells, which were sampled monthly through July, will continue to be sampled semi-annually.

Trevose Texaco, Lower Southampton Twp., Bucks

Onsite contamination was found in March, 2000. Motiva has installed off-site monitoring wells

and on-site recovery wells. Pump and treat system will be installed as soon as issues with PECO are resolved, probably starting next week. They resumed vacuuming out three drainage boxes in the yards of people off site. Took samples out of drainage boxes to monitor how well the effective the cleanup has been. A Site Characterization Report and Remediation Action Plan are due in the DEP office this month.


USTIF payments in the region (for 696 claims) exceed \$50 million since inception.

<<Southeast Regional MTBE Case Information Requested by EPA.doc>>

Be Vigilant, Be Safe
Preventing and Responding to Emergencies
<http://www.dep.state.pa.us/dep/emergency/response/>

Southeast Regional MTBE Case Information Requested by EPA

Case	# of private wells impacted	Highest Level of MTBE Offsite	Actions taken by DEP	Remediation	Source
Lehigh Marts Exxon, Rts 113 & 313 Bedminster/Hilltown Twps. Bucks County	21 homes with filtration systems; Now: 7 with > 20 ppb	< 1500 ppb	Reviewed Site Characterization Report and supplementary reports; Public meetings; e-mail updates; web site	Dual phase groundwater extraction system at station; 21 POET systems	Suspected Source: leaking tank system, Lehigh Marts Exxon under its former owner, Farm and Home, Inc.
Pools Corner Rts 202 & 113 Buckingham & Doylestown Twps/Doylestown Boro Bucks County	27 filtration systems; Now 3 with > 20 ppb	< 2000 ppb	Reviewed Site Characterization Report and supplementary reports; Public meetings; e-mail updates; web site	Pump & haul at ExxonMobil station; POET systems	Suspected source: Leaking tank systems ExxonMobil Station and TOSCO station
BP Amoco Warminster Twp Bucks County	4 homes connected to public water	< 200 ppb	Reviewed Site Characterization Report; Requested quarterly reports	Interim remedial action: pump & treat	Suspected source: tank system
ExxonMobil Warrington Twp. Bucks County	4 homes connected to public water	< 100 ppb	Reviewed Site Characterization Report; Requested quarterly reports	Pump & treat	Suspected source: Tank field
Rts 413 & 232 Wrightstown Twp. Bucks County	2 homes with filters Now 0 > ppb	< 200 ppb	Order to close 9/2000; DEP installed residential filter; provided bottled water; Current negotiating CO&A with stations; Public meeting; Web site	Awaiting Remedial Action Plan	Suspected source: leaking tank systems at Ferino's Texaco and Dale's Sunoco stations

{In Archive} Re: MtBE 

Michelle Hoover to: Jung.Choi

06/16/2000 08:41 AM

Archive: This message is being viewed in an archive.

Dear Mr. Choi:

How have you been doing? Thank you very much for the MTBE data. Right now, we are collecting information on MTBE from states and other organizations to learn more about the status of MTBE contamination within Region III. The data will only be used internally. Hopefully in the near future, we will get more complete information as more and more systems will be testing MTBE.

Best Regards.

Michelle Hoover
EPA Region III
Drinking Water Branch
(215) 814-5258

Jung.Choi@phila.gov



Jung.Choi@phila.gov
06/15/2000 04:25 PM

To: Michelle Hoover/R3/USEPA/US@EPA
cc:
Subject: MtBE

Dear Ms.Hoover,

Per your phone conversation with Earl Peterkin, I am forwarding a file containing PWD's MtBE results from the latest round of monitoring to you.

PWD began investigating the presence of MtBE in our source & finished waters in 1996 and repeated in 1998. As expected and fortunately for us, we have only seen background levels or at insignificant levels of MtBE as compared to the EPA Lifetime Health Advisory Exposure Range of 20 to 200 ppb.

Let me know if you need information.

Jung

Jung J. Choi
Manager, Scientific & Regulatory Affairs
Philadelphia Water Department
Phone (215)685-1407 Fax (215)743-5594



- mtbe01.xls

Intake and High Service MTBE Concentrations

	MTBE (ug/L)
Baxter Intake (4903, 5/8/00)	2.37
Baxter High Service (4001, 5/9/00)	2.16
Baxter Intake (4903, 5/9/00)	1.87
Baxter High Service (4001, 5/10/00)	1.48
Baxter Intake (4903, 5/10/00)	2.01
Baxter High Service (4001, 5/11/00)	1.95
Queen Lane Intake (5903, 5/8/00)	1.30
Queen Lane High Service (5004, 5/9/00)	1.90
Queen Lane Intake (5903, 5/9/00)	1.13
Queen Lane High Service (5004, 5/10/00)	2.57
Queen Lane Intake (5903, 5/10/00)	0.81
Queen Lane High Service (5004, 5/11/00)	1.38
Belmont Intake (6903, 5/8/00)	6.01
Belmont High Service (6001, 5/9/00)	1.67
Belmont Intake (6903, 5/9/00)	4.59
Belmont High Service (6001, 5/10/00)	2.00
Belmont Intake (6903, 5/10/00)	2.89
Belmont High Service (6001, 5/11/00)	3.11

From: CHRISTINE HAWK
To: moltzen-michael
Date: 11/27/96 10:17am
Subject: USGS MTBE Report -- Stormwater Samples containing MTBE

It appears you may not have received this yesterday; I had forwarded it to all Regional RFG contacts.

.....
As you may be aware, US Geological Survey (USGS) released a report (fact sheet) on November 21, 1996 titled Occurrence of the Gasoline Oxygenate MTBE and BTEX Compounds in Urban Stormwater in the US 1991-95. A copy of the fact sheet and press release will be faxed to you Wednesday morning. Attached is an issue paper that I forwarded to you earlier in the year to help respond to any inquiries on MTBE in groundwater; it may help to respond to any calls you may receive regarding the USGS findings released last week in the fact sheet.

The USGS fact sheet does not contain any new information. It presents the information contained in the draft Office of Science & Technology Policy (OSTP) report that was reviewed by the National Research Council (part of NAS) earlier this year. USGS has more or less extracted information from the Water Quality chapter of the OSTP report and has compiled it into a fact sheet for easier public distribution.

The fact sheet discusses the findings of stormwater samples taken in 16 cities and metropolitan areas under USGS's National Water Quality Assessment (NAWQA) Program. All of the MTBE detections in the stormwater were lower than EPA's draft lifetime health advisory (the final health advisory is expected to undergo internal peer review shortly and be released probably by January).

The press release (not fact sheet) also mentions preliminary information from a New England study which is also part of the USGS's NWQA Program -- this study is collecting samples from bedrock aquifers in New England. Detections have been at low concentrations (0.2 to 5.8 ug/L). Although a report has not been released yet on the findings, a one-page summary has been released recently. This summary will also be faxed to you Wednesday morning.

Please share this information with your Air Director as well as your "water counterparts". If you have any general questions, please call me at 202-233-9672. For detailed water quality questions, please call Evelyn Washington at 202-260-3029 in the OW.

The issue paper was not included with the email and therefore, RIII does not have such record.

